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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,017	11/20/2003	Timothy Clarence Willging	SJO920030048US1	5665

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EXAMINER

WALSH, JOHN B

ART UNIT

PAPER NUMBER

2151

MAIL DATE

DELIVERY MODE

05/20/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/721,017

Applicant(s)

WILLGING ET AL.

Examiner

John B. Walsh

Art Unit

2151

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-12,14-22 and 24-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-12,14-22 and 24-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: computer readable storage unit (claim 11) and computer readable storage medium (claim 21).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person should be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4-12, 14-22 and 24-30 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Publication No. 20030204597 A1 to Arakawa et al.

As concerns claims 1, 11, and 21, providing information on a network storage system, comprising: receiving, by a storage resource manager (200; 0054), information from at least one host system (figure 2 - 300; 0117) identifying storage units (figure 2; 100) the host systems access through at least one identified storage system; probing (0116,0117-server obtains/detects), by the storage resource manager, the at least one storage system to determine storage units

available through the storage system and an identifier (0048-0050; 0129; 0115; 0117) of the storage system, wherein the storage system manages access to the storage units and maintains an assignment of host systems to the storage units; and processing, by the storage resource manager, the information received from the host systems on storage units the host systems access and the information probed from the at least one storage system on the storage units available through the storage system to generate an association (figure 5; 1011, 1012) of host systems to storage units for the at least one storage system, wherein the association indicates for each storage system the identifier of the storage system, each storage unit available at the storage system and for each storage unit the at least one host system accessing the storage unit (0110-0117).

As concerns claims 2, 12 and 22, wherein the information from the host systems is gathered by an agent program (340) executing in each host systems that queries the host system to determine the storage units the host system is capable of accessing and the at least one storage system through which the storage units are accessed, and wherein the agent program transmits the information on the accessible storage units and the at least one determined storage system to the storage resource manager (310,330; 0054).

As concerns claims 4, 14 and 24, wherein the agent program determines the accessible storage units and the at least one storage system by issuing at least one inquiry command that is a member of set of an industry standard storage interface (0089).

As concerns claims 5, 15 and 25, wherein the industry standard storage interface (0089) comprises the Small Computer System Interface (SCSI) and wherein the inquiry command comprises a SCSI inquiry command and wherein the storage units comprise Logical Unit Numbers (LUNs) (figures 7-8).

As concerns claims 6, 16 and 26, wherein the agent program determines the accessible storage units and the at least one storage system by: issuing a first inquiry command to determine a vendor and model number (0115) of the storage system including the accessible at least one storage unit; determining whether the determined vendor and model number are for a recognizable storage system (0115); and issuing a second inquiry command to determine the at least one accessible storage unit and the identifier of the storage system having the accessible storage unit if the determined vendor and model number are for one recognizable storage system (0115-0117).

As concerns claims 7, 17 and 27, further comprising: maintaining, by the storage resource manager, in a data repository: (i) host system information (0128) including the information received from the host systems identifying the host system and the storage units accessible from that host system and (ii) storage system information (0128) probed from the at least one storage system identifying the storage system and the storage units available at through that storage system.

As concerns claims 8, 18 and 28, further comprising: maintaining, by the storage resource manager, host/storage unit assignment information (0127; 0117) indicating for one storage system the storage units available through that storage system and the host systems that access the available storage units, wherein the host/storage unit assignment information is generated by processing the host system and storage system information in the data repository.

As concerns claims 9, 19 and 29, wherein probing the at least one storage system comprises using an industry standard storage management interface to access information from the storage system (0089; 0042).

As concerns claims 10, 20 and 30, wherein the information received from the host systems indicates an operating system (320) used by the host system, wherein the storage resource manager further performs: generating information on the association of the host systems to storage units for at least one storage system (0128, 0133); and generating information on the operating system used by each host system associated with the storage units (0133).

Response to Arguments

4. Applicant's arguments filed April 8, 2008 have been fully considered but they are not persuasive.

Arakawa does not mention a storage resource manager (or system) separate from the storage system that probes the storage system to determine available storage units. The claims have been given the broadest reasonable interpretation and Arakawa does disclose both a storage resource manager (server-200) and storage system (100) that is separate (figures 2-4). Furthermore the claims do not explicitly recite the storage system is "separate" from the storage resource manager. Arakawa does disclose "probing" a storage system at least at paragraphs 0015-0017 wherein the server analyzes, obtains and detects information from various sources including a "storage system" (see paragraph 0015).

Applicant further argues Arakawa does not disclose a "storage resource manager" that probes the storage subsystem to determine information on the storage units and would have no need to perform the probing operation to determine information it already has. Arakawa discloses this limitation at least at paragraphs 0015-0017 wherein the server analyzes, obtains and detects information from various sources including a "storage system" (see paragraph 0015).

The examiner disagrees with the applicant's opinion that Arakawa would not need to perform this operation to gather information it already has, since it is contrary to what is disclosed in Arakawa wherein "probing" operations are performed to gather information. Information in the system of Arakawa changes over time and for updating the information is just one example of Arakawa's need to perform this operation.

Applicant further argues Arakawa at figure 5 does not disclose the claim limitations of a storage resource manager processes information received separately from hosts on storage units the hosts systems access and information probed from a storage system on storage units to generate an association that indicates for each storage system the identifier of the storage system, each storage unit available at the storage system and for each storage unit the at least one host system accessing the storage unit. The claims do not explicitly recite the the storage resource manager process information received separately from hosts (emphasis added). These newly added limitations have been given the broadest reasonable interpretation and have been addressed in the rejection above.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Walsh whose telephone number is 571-272-7063. The examiner can normally be reached on Monday-Thursday from 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John B. Walsh/
Primary Examiner, Art Unit 2151